

Preliminary Amendment  
Application Number 09/505,192

Atty Docket Number Q57919

**REMARKS**

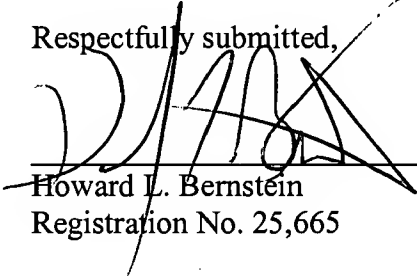
These amendments do not narrow the scope of the claims but are made for precision of language. New claims 14-18 are added to more fully claim the invention of the subject application.

Applicant's respectfully request entry of the Amendment Under 37 C.F.R. §1.116 filed on September 17, 2002.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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## APPENDIX

### VERSION WITH MARKINGS TO SHOW CHANGES MADE

#### IN THE CLAIMS:

**The claims are amended as follows:**

2. (Amended) The driving circuit of the display device according to claim 1, wherein said voltage adjusting means is comprised of a resistor, one end of which is connected to an output terminal of said operational amplifier, an active device connected to another end of said resistor and controlling means for controlling operations of said active device based on said low order bits of said digital image data, wherein said other end of said resistor is connected to said display device.

3. (Amended) The driving circuit of the display device according to claim 1, wherein said active device has a first transistor, a drain of which is connected to said resistor, a source of which supply power is applied to and a gate voltage of which is controlled by said controlling means, and a second transistor a drain of which is connected to said resistor, a source of which is connected to a ground and a gate voltage of which is controlled by said controlling means.

7. (Amended) The driving circuit of the display device according to claim 1, wherein a voltage outputted from said gray shade voltage generating means is a positive polarity voltage [or] and a negative polarity voltage.

8. (Amended) The driving circuit of the display device according to claim 1, wherein, when [the number of] bits of said digital image data [is] are N, said high order bits are composed of (N-[m]1) bits counted from the most significant bit of said digital image data and [said] the low order bit[s are] is composed of [m] one bit[s] counted from the least significant bit of the digital image data.

**Claims 14-18 are added as new claims.**

--14. (New) A driving circuit of a display device for displaying a plurality of gray shades based on inputted digital image data comprising:

a gray shade voltage generating circuit for generating a plurality of voltages;

a gray shade voltage selecting circuit for selecting one voltage out of a plurality of voltages supplied from said gray shade voltage generating circuit based on high order bits composed of at least one bit counted from the most significant bit of said digital image data, and for outputting said voltage;

an operational amplifier used to amplify a voltage outputted from said gray shade voltage selecting circuit; and

a voltage adjusting circuit for inducing a voltage rise or a voltage drop of a voltage outputted from said operational amplifier based on low order bits of said digital image data;

wherein said voltage adjusting circuit is comprised of a resistor, one end of which is connected to an output terminal of said operational amplifier, an active device connected to another end of said resistor and controlling circuit for controlling operations of said active device

based on said low order bits of said digital image data, wherein said other end of said resistor is connected to said display device.

15. (New) The driving circuit of the display device according to claim 14, wherein said active device has a first transistor, a drain of which is connected to said another end of said resistor, a source of which supply power is applied to and a gate voltage of which is controlled by said controlling circuit, and a second transistor a drain of which is connected to said another end of said resistor, a source of which is connected to a ground and a gate voltage of which is controlled by said controlling circuit.

16. (New) The driving circuit of the display device according to claim 14, wherein said resistor is composed of an analog switch.

17. (New) The driving circuit of the display device according to claim 14, wherein a voltage outputted from said gray shade voltage generating circuit is a positive polarity voltage and a negative polarity voltage.

18. (New) The driving circuit of the display device according to claim 1, wherein, when bits of said digital image data are N, said high order bits are composed of (N-1) bits counted from the most significant bit of said digital image data and the low order bit is composed of one bit counted from the least significant bit of the digital image data.--